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## CLAIMS

1. Pressure-air driven percussion device for a down-the-hole drill (1) with a hammer-piston (6) which is axially reciprocally movable in a hammer-piston chamber (18) through a driving device (9), said hammer-piston (6) in operation acting with a hammer-end (16) against an upper end (17) of a drill bit (2) which is positioned inside a chuck (3), wherein an air cushion for reducing percussive power is arranged to be formed at the hammer-end of the hammer-piston in positions where the drill bit (2) has been moved passed a predetermined distance in the percussion direction,

characterised in

- that the drill bit (2) is sealingly slidingly supported in a drill bit bushing (5), and

that the hammer-end (16) of the hammer-piston (6) is formed so that it sealingly cooperates with the drill bit bushing (5) in said positions in order to form said aircushion (19).

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2. Percussion device according to claim 1, characterised in that an upper end portion (17) of the drill bit (2) is sealingly, slidingly supported in the drill bit bushing (5).

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- 3. Percussion device according to claim 1 or 2, characterised in that said air-cushion is arranged to be formed in a volume (19) defined by the upper end (17) of the drill bit (2), the drill bit bushing (5) and the hammer-end (16) of the hammer-piston (6).
- 4. Percussion device according to any of the previous claims,

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characterised in that the drill bit bushing (5) is arranged to be supported by a housing (4) of the down-the-hole drill (1).

5 5. Percussion device according to any of the previous claims,
characterised in that the hammer-piston chamber (18) is

formed by a housing of the down-the-hole drill (1).

- 10 6. Percussion device according to any of the previous claims,
  characterised in that the driving device (9) includes a leakage passage (12, 13, 14) for the pressure-air, through which a flushing position is established, wherein pressure-air is allowed to leak passed the driving device (9) in far advanced positions in the percussion direction of the hammer-piston (6).
- 7. Percussion device according to any of the previous claims, characterised in that the hammer-piston (6) is provided with a central axial channel (8) which continuous in the drill bit (2) over a foot valve (7), which is fastened in the drill bit (2) and seals against the hammer-piston (6).

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- 8. Percussion device according to claim 7, characterised in that the air-cushion is also limited by the outside surface of the foot valve (7).
- 30 9. Down-the-hole drill (1) including a percussion device according to any of the previous claims.